

**REMARKS/ARGUMENTS**

Claims 15-26, 28-42, and 44-49 are pending in this application, of which claims 15 and 31 are independent. Claims 15, 17, 25, 26, 28, 29, 31-35, 41, 42, 44, and 45 are amended. Claims 27 and 43 are canceled without prejudice to or disclaimer of the subject matter recited therein. New claims 47-49 are amended.

The courtesies extended to Applicant's representatives by Examiner Choudhury at the interview held on November 4, 2008, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicant's record of the interview.

**REJECTIONS UNDER 35 U.S.C. § 103**

In sections 1-17 on pages 2-7, the Office Action rejects claims 15-46 under 35 U.S.C. § 103 as allegedly being unpatentable over U.S. Patent Number 6,490,273 to DeNap et al. ("DeNap"). Applicant respectfully traverses this rejection, as DeNap fails to disclose, teach, or suggest a number of recited elements. Applicant will address each of these elements in turn.

*1. DeNap Fails to Disclose, Teach, or Suggest Forming Only One Virtual Connection Between an Access Node and Each Service Provider*

Independent claim 15 recites "forming a virtual connection between the ATM access node and a service provider of choice . . . wherein only one virtual connection

is formed between the ATM access node and each service provider” (emphasis added). Independent claim 31 contains a similar recitation. The subject matter added to these claims finds support in the specification as filed on, for example, page 2, lines 33-36, and page 4, lines 18-25.

As described in the specification as filed, the claimed subject matter is directed to establishment of a connection between customer premise equipment and a service provider selected using an integrated signaling protocol. *Application as Filed, Page 4, Lines 1-6*. This subject matter saves a considerable amount of PVCs over known access mechanisms. *Id., Page 5, Lines 17-25*. In particular, known access mechanisms require a separate PVC for each customer/SP combination. *Id.* In contrast, the mechanism according to the invention requires a PVC only for each customer and each ASF/SP combination. *Id.* In other words, use of a tunneling protocol enables customers to share the connection between the access node and a given service provider, thereby minimizing the number of connections and reducing costs.

Applicant respectfully submits that DeNap fails to disclose, teach, or suggest the above-quoted and described subject matter. DeNap relates to a phased approach for migrating from initial service offerings to a full-service ATM network. *DeNap, Column 1, Lines 57-63*. Although DeNap describes establishment of a series of PVCs between elements in the network, DeNap fails to disclose that only a

single virtual connection is established an ATM access node and each service provider. *Id.*, e.g., *Column 9, Lines 37-58*.

Accordingly, Applicant respectfully submits that DeNap fails to disclose, teach, or suggest “forming a virtual connection between the ATM access node and a service provider of choice . . . wherein only one virtual connection is formed between the ATM access node and each service provider,” as recited in independent claim 15 and similarly recited in independent claim 31.

2. DeNap Fails to Disclose, Teach, or Suggest the Use of a Tunneling Protocol  
Between an ATM Access Node and NT Point

Independent claim 15 recites “establishing a tunneling protocol integrated with a signaling protocol over the permanent virtual connection between the ATM access node and the NT point.” Independent claim 31 contains a similar recitation. The subject matter added to these claims finds support in the specification as filed on, for example, page 4, lines 1-6.

As described in the specification as filed, the tunneling protocol combines the sessions and signaling from all active PCs into a single tunnel from the NT to the access node. *Application as Filed, Page 3, Lines 34-35*. The use of a tunneling protocol integrated with a signaling protocol provides end-to-end security, as it is not necessary for the ATM access node to perform authentication. *Id.*, *Page 4, Lines*

8-16. Furthermore, the end-user's choice of a service provider is not known to the ATM operator, which also benefits the service provider. *Id.*

Applicant respectfully submits that DeNap fails to disclose, teach, or suggest the above-quoted and described subject matter. At the interview on November 4, 2008, Examiner Choudhury directed Applicant to column 13, lines 9-25. Applicant has reviewed this portion of DeNap and believes that it does not disclose the recited subject matter for at least the following reasons.

DeNap discloses that "the remote access server 912 uses a Secure IP tunnel to the router 506 in the service node 120 using Layer 2 Tunneling Protocol (L2TP)." *DeNap, Column 13, Lines 12-15.* "The router 506 will use an ATM PVC to exchange the traffic with the business hub 210 at the business 101." *Id., Column 13, Lines 16-17.* Thus, with reference to Figure 9 of DeNap, a tunnel is used between remote access server 912 and router 506, both elements within service node 120. This tunnel is therefore not between an ATM access node and an NT point, but is between two elements within a single node. Furthermore, DeNap does not disclose that these tunnels utilize an integrated signaling protocol.

DeNap goes on to state that "The remote access server will use a secure IP tunnel to a router in another service node that serves the business." *Id., Column 13, Lines 23-24.* Again, Applicant respectfully submits that this portion of DeNap does not teach the recited subject matter. In particular, this portion of DeNap indicates that tunneling is used between two service nodes, not between an ATM

access node and a NT point. Again, DeNap also does not disclose that this tunnel utilizes an integrated signaling protocol.

Accordingly, Applicant respectfully submits that DeNap fails to disclose, teach, or suggest “establishing a tunneling protocol integrated with a signaling protocol over the permanent virtual connection between the ATM access node and the NT point,” as recited in independent claim 15 and similarly recited in independent claim 31.

3. *DeNap Fails to Disclose, Teach, or Suggest Establishing a PVC Between an Access Node and an NT Point*

Independent claim 15 recites “establishing a permanent virtual connection between the ATM access node and the NT point” (emphasis added). Independent claim 31 contains a similar recitation. The subject matter added to these claims finds support in the specification as filed on, for example, page 3, lines 28-32.

This amendment is not merely cosmetic, but instead introduces subject matter that provides a significant advantage. In particular, adding a network termination point between the customer premise equipment and the access node permits the use of tunneling integrated with signaling, such that the ATM access node operates as a router. Furthermore, all personal computers connected to a LAN share the permanent virtual connection between the network termination point and the access node. *Application as Filed, Page 3, Lines 30-32.*

Applicant respectfully submits that DeNap fails to disclose, teach, or suggest the above-quoted and described subject matter. Applicant has thoroughly reviewed the disclosure of DeNap and submits that DeNap fails to disclose any NT point. Rather, the business hub, metro network, service node, and other elements of DeNap do not operate as network termination points.

Accordingly, Applicant respectfully submits that DeNap fails to disclose, teach, or suggest “establishing a permanent virtual connection between the ATM access node and the NT point,” as recited in independent claim 15 and similarly recited in independent claim 31.

#### 4. Conclusion

As described in detail above, Applicant respectfully submits that DeNap fails to disclose, teach, or suggest a number of elements recited in independent claims 15 and 31. Accordingly, claims 15 and 31 are allowable over DeNap.

Claims 16-26 and 28-30 depend from allowable claim 15, while claims 32-42 and 44-46 depend from allowable claim 31. Thus, claims 16-26, 28-30, 32-42, and 44-46 are allowable at least by virtue of their dependencies upon allowable base claims. As described above, claims 27 and 43 are canceled without prejudice to or disclaimer of the subject matter previously recited therein.

For at least the foregoing reasons, Applicant respectfully requests that the rejection of claims 15-46 under 35 U.S.C. § 103 be withdrawn.

### NEW CLAIMS

New claim 47 recites, “The method of claim 15, wherein the tunneling protocol combines the sessions and signaling from all active CPEs connected to the NT point into a single tunnel from the NT point to the ATM access node.” This subject matter finds support in the originally filed specification on, for example, page 3, lines 34-35.

New claim 48 recites, “The method of claim 15, wherein the NT point comprises a LAN interface configured automatically using a Dynamic Host Configuration Protocol (DHCP).” This subject matter finds support in the originally filed specification on, for example, page 5, lines 6-8.

New claim 49 recites, “The method of claim 15, wherein the NT point comprises an ATM interface configured using a Interim Local Management Interface (ILMI) protocol.” This support matter finds support in the originally filed specification on, for example, page 5, lines 2-4.

Claims 47-49 depend from claim 15. As discussed in further detail above, the publications of record fail to disclose, teach, or suggest, inter alia, forming only one virtual connection between an access node and each service provider, the use of a tunneling protocol between an ATM access node and an NT point, and establishing a PVC between an access node and an NT point, as recited in claim 15. Thus,

Applicant respectfully submits that new claims 47-49 are allowable based at least on their dependencies from allowable claim 15.

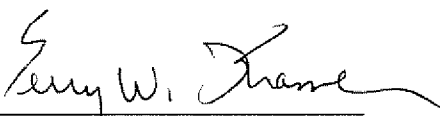
### CONCLUSION

While we believe that the instant amendment places the application in condition for allowance, should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner telephone the undersigned attorney in order to expeditiously resolve any outstanding issues.

In the event that the fees submitted prove to be insufficient in connection with the filing of this paper, please charge our Deposit Account Number 50-0578 and please credit any excess fees to such Deposit Account.

Respectfully submitted,  
**KRAMER & AMADO, P.C.**

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